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Supreme Court of the United States

OCTOBER TERM, 1948

Nos. 7, 8 and 48

7, 8 & 48

THOGER GRONBERG JUNGERSEN,
Petitioner-Respondent,

v.

OSTBY AND BARTON COMPANY, et al.,
Respondents-Petitioners,

and

THOGER GRONBERG JUNGERSEN,
Petitioner,

v.

ROBERT BADEN, ROSE BADEN, ALBERT FOSS, et al., etc.,
Respondents.

REPLY BRIEF FOR JUNGERSEN.

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New York, N. Y.,
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INDEX

PAGE

Jungersen Does Not Contend that the Jewelry Art is *Sui Generis* 1

The Kralund Patent 3

Discussion of the *Lincoln* and *Bassick* Cases 8

Table of Cases

Bassick Co. v. Hollingshead Co., 298 U. S. 415 8

Lincoln Co. v. Stewart-Warner Corp., 303 U. S. 545 .. 8

Williams Mfg. Co. v. United Shoe Machinery Corp., 316 U. S. 364 8

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It is not Jungersen's position "that the *jewelry art* is *sui generis* and that *jewelry* casting is quarantined from and has no contact with other phases or types of the casting art" (Respondent's Brief, p. 6).

On the contrary, it was the failure over centuries of use by the most ingenious and resourceful craftsmen to extend this art into the field opened up by Jungersen—the repetitive production of small metal articles of intricate design

with hollows, undercut portions and perforations—that marks Jungersen's work as a substantial technological innovation.

Historically, this innovation was made by Jungersen in the particular field of jewelry manufacture. It was in that field that the long-felt want existed. Every time the jewelry maker used the cuttle fish casting or sand casting which produced no more than a "dummy" of the final product he was after, and had to pay highly skilled craftsmen to complete the intricate design by cutting, he faced the need for a method of casting that would give him the intricate design without cutting. When, driven by these high labor costs, he accepted the unavailability of casting for his purpose, and resorted to the high initial cost of forming dies, he reflected the economic pressure of the then-accepted limitations of casting.

Historically, Jungersen overcame these limitations by his method which reduced to an absolute minimum the skilled labor necessary to a finished product and made economically possible the repetitive production of small metal articles of jewelry of intricate design, thereby making jewelry casting a practically and commercially useful art because it could now reproduce intricate pieces having undercuts, hollows and perforations without loss of detail and in exact duplication in any number (Main Br., pp. 11 and 12 and Shaw 54a, f. 161; Schaeffer 119-120; 120a; 122a, f. 364; 123a, f. 368; Tour 181a, f. 541; Slatis 217a, f. 650; 227a, f. 681; Matson 289a, f. 865).

As usually happens upon the introduction of substantial technological innovations, the new method of casting has a field of application measured by the utility of the method itself, and not by the word "jewelry". The new method was achieved in Jungersen's first embodiment of it (Main Br., pp. 6-9) when Jungersen copied the intricate details of his model by building up about the model a primary mold of plastic mold-forming material such as rub-

ber (including type metal for more massive rings—78, f. 232; 103a, f. 308; 85, f. 255) and then projecting the wax, of the "lost wax" process, into the fine interstices of the primary mold by centrifugal force.

When, by this combination of ideas, the barrier had been broken down, and the jeweler, or any other manufacturer interested in the repetitive reproduction in metal of small and intricate designs (see 104a, f. 310), realized that this new field was opened up to the art of casting, the knowledge and capabilities of men trained in the technology of that art became available to analyze the nature of Jungersen's contribution and to reproduce it in specifically different but equivalent embodiments. It was known to such men, as a matter of course, that the initial molds could be built up of such equivalent materials as glue, gelatin and low-melting metal alloys as well as rubber, and they soon found that in other ways equivalent to centrifugal force, such as the syringe and the injector machine, the wax could be thrown into the intricate impervious mold in such a way that it would displace the air within the mold, the molten wax congealing first against the exposed surfaces of the cavity formed in the mold, and any air which might be trapped in a recess of the mold would be crowded back into the fluid body under the pressure applied thereto and the fluid material would advance into the recess as it crowded the air therefrom and so would progressively congeal against the wall of the recess until the finest of cavities would be completely filled (Pat. 185/2-9-25).

Our position is, as we tried to make clear (Br. pp. 36-47), that Jungersen's patent can be and should be fairly construed to embrace such equivalent procedures.

Kralund's suggestion was a step aside, but certainly not in the direction of extending the art of casting into the field of minute articles of intricate design. Nor was it in the direction of doing away with the high cost of tool-cut metal dies. It was a suggestion in the pressure die-casting branch of the casting art intended to minimize the destruction of

these costly cut metal dies when they were to be used for repetitive production of castings so large that the heat in the mass of molten metal could not be carried away effectively by the heat conductivity of the metal dies and consequently rapidly destroyed them. As we pointed out in our main brief (p. 34), this was about as far from a solution of Jungersen's problem as anything in the casting art could be.

Our opponents' brief quotes excerpts from the testimony of their expert Tour which certainly give the impression at the least that the process disclosed in the Kralund patent was an existing commercial process with which Tour had had years of experience and is now the process known as precision casting, used extensively during this war in the production of small intricate commercial castings (Br. pp. 13-14). A careful analysis of Tour's whole testimony discloses, however, that in these quotations Tour is actually using the term "Kralund process" as synonymous with the Jungersen process. There is actually no evidence in the record that the true Kralund process as Kralund disclosed it was ever used commercially. Mr. Tour was employed by the Doehler Co., owner of the Kralund patent, from 1921 to 1928 (147, f. 441). In the *Ostby* and *Barton* case, Mr. Tour did testify that the Kralund process "was operated there. I worked with Kralund in its operation" (162a, f. 486). But in the *Baden* case, he explained that "what I did in that type of work was experimental" and had nothing to do with production in the plant (154, f. 461).*

* In view of the innuendos regarding the Kralund process in Tour's testimony and their acceptance by counsel as evidence that Kralund's process went into wide use and that Tour had extensive experience with it, we feel free to state that we have what appears to be incontrovertible evidence that the Kralund process was never used beyond experimental use by the Doehler Co. and was discarded as impractical by that company before the Kralund patent issued and several years before Mr. Tour was employed by them. We have submitted this evidence to opponents' counsel and he may wish to correct the false impression created by Mr. Tour's testimony.

Returning to the quotations referred to in the brief, counsel state:

> "Mr. Tour testified, without challenge, that the accused O & B process was 'substantially the Kralund process with which [he had] had so many years' experience' (170a, 153-155)" (Brief, p. 13).

The excerpt is incomplete. At this point, Mr. Tour was being asked on cross-examination to compare the process of Ostby & Barton and those used by the other firms, about a half dozen in number, for which Tour was consultant. After saying that there was relatively little difference between them, he then made the statement, part of which is quoted in the brief—"They are all substantially the Kralund process * * *" (170a). But it was further brought out on cross-examination that the use of Jungersen's process by one of the Jungersen licensees, J. R. Wood, is included by Tour among the uses of the Kralund process (180a, f. 538). The testimony is that J. R. Wood's present practice is exactly the same as the practice which Jungersen first taught them in 1937 (73a, f. 217; 70a).

This discloses the argumentative sense in which Tour here uses the term "Kralund process". It is not a factual statement that the process actually disclosed in the Kralund patent was ever used, but rather his argument that the Jungersen process with which he had had so many years experience is essentially the same as the Kralund process.

Our opponents' brief also quotes Mr. Tour's testimony to the effect that castings "made according to the Kralund method" are "accurate" and "what we call now precision castings" and are "more accurate than jewelry castings on the whole" (Br. p. 14).

But here again Mr. Tour in his testimony was argumentatively using the term "Kralund process" as synonymous with the Jungersen process.

Immediately preceding these statements, Mr. Tour testified that the Kralund process "has been applied very extensively during this war to the casting of millions of small articles" and that he had had to do with that casting operation (155, f. 464).

At another point the argumentative nature of the above assertions is revealed as follows:

> "Have you had definite and direct experience within the last couple of years, Mr. Tour, with any system of precision casting of war instruments which *essentially* involve the use of Kralund? A. Yes, sir. Considerable." (164a, f. 490—Emphasis ours.)

There is evidence of the strongest sort in the record that the process disclosed in the Kralund patent was never used in precision casting during the war. Mr. Robinson, a witness called by Jungersen, was head engineer of Industrial Processes and Products of the Office of Production Research and Development, a part of the War Production Board, and had charge of precision casting. He was also a member of the Advisory Committee on Precision Casting of the National Research Council, and in both capacities had occasion to investigate the Jungersen process (172-173). He was on this Committee practically for the duration of the war and has been practically all over this country in the precision casting plants, using the Jungersen, the Austenal and other processes. After the war, he went abroad to investigate the precision casting technique in Germany for the Joint Chiefs of Staff (179).

Mr. Robinson testified (178):

> "Have you ever seen casting as described in the Kralund patent by which a wax model is made in a mold by injection with a die-casting machine and then invested and then burned out and then cast? A. I have never seen a die pressure casting machine used to inject wax into a die or any other form of receptacle."

The fact is that during the war the new casting tool with which Jungersen had provided the jewelry trade found an enlarged field of utility in its application to the casting of small intricate commercial parts—a field sometimes referred to as precision casting (110a, f. 328). Jungersen licensed the Government (101, f. 301) and his licensees made millions of castings in war work that could not be made by any other method (101, f. 303; 120-121, ff, 360-361).

Mr. Tour's conclusions as to the supposed similarity between Kralund and Jungersen, upon which he presumably would justify his merging of their identity, stem largely from a disregard of the differences between them (see 153, f. 457). At other times, recognizing some differences, he resorts to generalities to minimize the differences, such as the statement that pressure die-casting and centrifugal casting are alternative means of performing the same operation (154, f. 460). This obscures the reality of the situation which is that the high die-casting pressures proposed by Kralund for his suggested application of the lost-wax process cannot be used in the Jungersen process. That is apparent from the Kralund patent itself (415a, ff. 114-119; our main brief, p. 23). The effect of the forces are quite different in the two operations. Mr. Robinson, who on this record is the most qualified witness to speak on the subject, said that "there is a distinct difference between the die pressure casting machine effect and your so-called syringe, eye dropper, or centrifugal force" (178, f. 533).

What Mr. Tour's argument, as well as that of counsel in the brief, comes down to is that the changes necessary to convert the Kralund process into the Jungersen process involve merely the substitution of known instrumentalities and known forces used in other environments in the casting art. From this they now conclude that such changes would be obvious. The evidence as a whole, as we have pointed out, forbids such a conclusion and should in particular prevent Mr. Tour from asserting it. Mr. Tour was familiar,

as we have seen, with the Kralund patent and had worked with the process experimentally. Beginning in 1929, he became a jewelry consultant, including among his clients Ostby & Barton (146a; 169a, f. 507; 170, f. 509); and yet he failed to suggest the utility of anything in Kralund for jewelry manufacture. For all that Mr. Tour did, his clients would have continued to use the old inadequate casting processes which Jungersen's discovery and contribution superseded.

Our opponents' brief advances the proposition that the patentee may not repatent an old combination simply by improving one of its steps as Jungersen has, they say, here attempted to do, citing *Lincoln Co.* v. *Stewart-Warner Corp.*, 303 U. S. 545, and *Bassick Co.* v. *Hollingshead Co.*, 298 U. S. 415 (Br. 19).

The proposition is not applicable here for clearly Jungersen has not attempted to patent any part of the old wax process. True, some of the recited steps in his process are old, but the recital was necessary to a statement of a complete and operative process. Without a complete recital of the necessary steps, the claims would have been defective as incomplete or inoperative under Patent Office procedure.

It is quite clear, moreover, that these claims cannot be interpreted to extend the monopoly beyond the improved process actually developed by Jungersen. Anyone is free to use the old "lost-wax" processes disclosed in the various references here in the record, and the claims in their present form could not be used even on any theory of contributory infringement to prevent the use of all or any part of those prior processes.

The *Bassick* and *Lincoln* cases were, as Justice Roberts pointed out in *Williams Mfg. Co.* v. *United Shoe Machinery Corp.*, 316 U. S. 364, 370, "suits for contributory infringement" and there the "effort was to extend the monopoly embodied in the improved pin fitting so as to prevent sale or use of well known grease guns of the prior art". Justice

Roberts went on to point out in the *Williams* case that the suit was not "for the use of an automatic bed lasting and tacking machine as such", which was included as a part of the claim so as to make it operative. "It is for the use in such a machine of improvements of certain features of the machine. The respondent does not pretend to fix liability on the petitioner for contributory infringement by reason of the use of an automatic power driven lasting and tacking machine which does not employ the novel improvements of the combinations claimed, and could not do so." This covers the situation here.

Respectfully submitted,

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